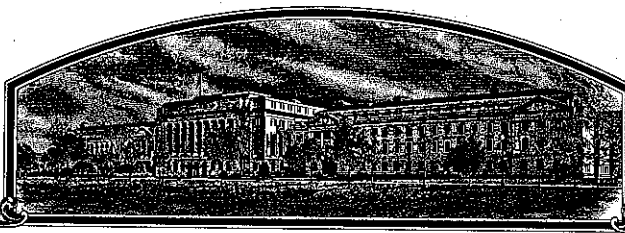


No.

9400199



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Virginia Polytechnic Institute
and State University

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS SEED OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (34 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'Chesapeake'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this 31st day of October in the year of our Lord one thousand nine hundred and ninety-five.

Attest:

Marsba A. Stanton

Commissioner

Plant Variety Protection Office
Agricultural Marketing Service

Stan J. Feltman
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(INSTRUCTIONS ON REVERSE)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).


1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) Virginia Polytechnic Institute and State University		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO. V81-141	3. VARIETY NAME Chesapeake
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP) Blacksburg, VA 24061		5. PHONE (include area code)	FOR OFFICIAL USE ONLY
6. GENUS AND SPECIES NAME Glycine max		7. FAMILY NAME (Botanical) Leguminosae	PVPO NUMBER 9400199
8. CROP KIND NAME (Common Name) Soybeans		9. DATE OF DETERMINATION May, 1993	Filing and Examination Fee: \$ 2,325.00 Date June 13, 1994 Time <input type="checkbox"/> A.M. <input checked="" type="checkbox"/> P.M.
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) University		Filing and Examination Fee: \$ 2,325.00 Date June 8, 1994 Certificate Fee: \$ 275.00 Date Aug. 30, 1995	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION		12. DATE OF INCORPORATION	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Glenn R. Buss Crop and Soil Environmental Sciences Virginia Tech Blacksburg, VA 24061-0404			

PHONE (include area code): (703) 231-9788

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)	
<input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety <input checked="" type="checkbox"/> Exhibit B, Novelty Statement <input checked="" type="checkbox"/> Exhibit C, Objective Description of Variety <input type="checkbox"/> Exhibit D, Additional Description of Variety <input checked="" type="checkbox"/> Exhibit E, Statement of the Basis of Applicant's Ownership <input checked="" type="checkbox"/> Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office 6/3/94 <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,325) made payable to "Treasurer of the United States"	
15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See section 83(a) of the Plant Variety Protection Act) <input checked="" type="checkbox"/> YES (If "YES," answer items 16 and 17 below) <input type="checkbox"/> NO (If "NO," skip to item 18 below)	
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? 20 Oct 1995 <input checked="" type="checkbox"/> YES <input checked="" type="checkbox"/> NO	17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED 30 Oct. 1995
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? <input type="checkbox"/> YES (If "YES," through <input type="checkbox"/> Plant Variety Protection Act <input type="checkbox"/> Patent Act. Give date: _____) <input checked="" type="checkbox"/> NO	
19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES (If "YES," GIVE NAMES OF COUNTRIES AND DATES) Released in U.S., February, 1993 <input type="checkbox"/> NO	
20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.	

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT (Owner(s)) 	CAPACITY OR TITLE Director, Virginia Ag. Expt. Station	DATE 6/30/94
SIGNATURE OF APPLICANT (Owner(s))	CAPACITY OR TITLE	DATE

Amended August, 1995

EXHIBIT A

Origin and Breeding History of Chesapeake

Chesapeake was selected from the cross of Essex x V71-793. The complete pedigree is shown in Figure 1. The segregating generations were advanced to the F_4 by a modified single seed descent method. F_4 plants were selected and threshed individually. A single progeny row was planted from each F_4 plant. About 10 percent of the rows were selected on general appearance. Selected lines were evaluated in preliminary replicated yield tests.

Chesapeake was evaluated in local yield tests from 1982 through 1984. In 1985, it was entered in the Southern Regional Preliminary Group IV-S cooperative tests, grown in eight states in the Southeast and was advanced to the Uniform Group IV-S test in 1986. It has been evaluated in state cultivar tests since 1987.

After a tentative decision had been made to release Chesapeake, about 100 individual random plants were threshed and the seeds were planted in single progeny rows the following year. Fifty of those rows which were most uniform and typical of Chesapeake were harvested. Bulk seed from those rows was planted for increase in 1991. Small samples of seed from each row were placed in cold storage at the Eastern Virginia Agricultural Research and Extension Center and will be used for further increases of Breeder Seed as needed.

No variants or off-types were known to be present in the original Breeder Seed and none of any consequence have been observed in subsequent increases. The variety has been very stable through several generations of increase.

EXHIBIT B

Novelty Statement

Chesapeake is most like RA 452, but Chesapeake matures about six days earlier and mature plants are about four inches shorter than RA 452. Also, the protein content of Chesapeake seeds are more than 2% above that of RA 452 and oil content is about 1% below RA 452.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
~~LIVESTOCK, MEAT, GRAIN, POULTRY DIVISION~~
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

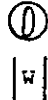
EXHIBIT C
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (*Glycine max* L.)

NAME OF APPLICANT(S) <i>Virginia Polytechnic Institute and State University</i>	TEMPORARY DESIGNATION <i>V81-141</i>	VARIETY NAME <i>Chesapeake</i>
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) <i>Blacksburg, VA 24061</i>		FOR OFFICIAL USE ONLY PVPO NUMBER <i>9400199</i>

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g.,). Starred characters ★ are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

1. SEED SHAPE:



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)

2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

★ 2. SEED COAT COLOR: (Mature Seed)

1 = Yellow

2 = Green

3 = Brown

4 = Black

5 = Other (Specify) _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

1 = Dull ('Corsoy 79'; 'Braxton')

2 = Shiny ('Nebsoy'; 'Gasoy 17')

★ 4. SEED SIZE: (Mature Seed)

Grams per 100 seeds

★ 5. HILUM COLOR: (Mature Seed)

1 = Buff

2 = Yellow

3 = Brown

4 = Gray

5 = Imperfect Black

6 = Black

7 = Other (Specify) _____

★ 6. COTYLEDON COLOR: (Mature Seed)

1 = Yellow

2 = Green

★ 7. SEED PROTEIN PEROXIDASE ACTIVITY:

1 = Low

2 = High

★ 8. SEED PROTEIN ELECTROPHORETIC BAND:

1 = Type A (SP1^a)2 = Type B (SP1^b)

★ 9. HYPOCOTYL COLOR:

1 = Green only ('Evans'; 'Davis')

2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')

3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')

4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

★ 10. LEAFLET SHAPE:

1 = Lanceolate

2 = Oval

3 = Ovate

4 = Other (Specify) _____

11. LEAFLET SIZE:

☐1 = Small ('Amsoy 71'; 'A5312')
3 = Large ('Crawford'; 'Tracy')

2 = Medium ('Corsoy 79'; 'Gasoy 17')

12. LEAF COLOR:

☐1 = Light Green ('Weber'; 'York')
3 = Dark Green ('Gnome'; 'Tracy')

2 = Medium Green ('Corsoy 79'; 'Braxton')

★ 13. FLOWER COLOR:

☒

1 = White

2 = Purple

3 = White with purple throat

★ 14. POD COLOR:

☒

1 = Tan

2 = Brown

3 = Black

★ 15. PLANT PUBESCENCE COLOR:

☒

1 = Gray

2 = Brown (Tawny)

16. PLANT TYPES:

☒1 = Slender ('Essex'; 'Amsoy 71')
3 = Bushy ('Gnome'; 'Govan')

2 = Intermediate ('Amcor'; 'Braxton')

★ 17. PLANT HABIT:

☒

1 = Determinate ('Gnome'; 'Braxton')

2 = Semi-Determinate ('Will')

3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

★ 18. MATURITY GROUP:

☒1 = 000
9 = VI2 = 00
10 = VII3 = 0
11 = VIII4 = I
12 = IX5 = II
13 = X

6 = III

7 = IV

8 = V

★ 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

BACTERIAL DISEASES:

★

☒Bacterial Pustule (*Xanthomonas phaseoli* var. *sojensis*)

★

☒Bacterial Blight (*Pseudomonas glycinea*)

★

☒Wildfire (*Pseudomonas tabaci*)

FUNGAL DISEASES:

★

☒Brown Spot (*Septoria glycines*)Frogeye Leaf Spot (*Cercospora sojina*)

★

☒

Race 1

☐

Race 2

☐

Race 3

☐

Race 4

☐

Race 5

☐

Other (Specify) _____

☒Target Spot (*Corynespora cassicola*)☒Downy Mildew (*Peronospora trifoliorum* var. *manshurica*)☒Powdery Mildew (*Microsphaera diffusa*)

★

☒Brown Stem Rot (*Cephalosporium gregatum*)☒Stem Canker (*Diaporthe phaseolorum* var. *caulivora*)

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

- ★ ☒ Pod and Stem Blight (*Diaporthe phaseolorum* var; *sojae*)
- ☒ Purple Seed Stain (*Cercospora kikuchii*)
- ☒ Rhizoctonia Root Rot (*Rhizoctonia solani*)
- Phytophthora Rot (*Phytophthora megasperma* var. *sojae*)
- ★ ☒ Race 1 ☐ Race 2 ☐ Race 3 ☐ Race 4 ☐ Race 5 ☐ Race 6 ☐ Race 7
- ☐ Race 8 ☐ Race 9 ☐ Other (Specify) _____

VIRAL DISEASES:

- ☒ Bud Blight (Tobacco Ringspot Virus)
- ☒ Yellow Mosaic (Bean Yellow Mosaic Virus)
- ★ ☒ Cowpea Mosaic (Cowpea Chlorotic Virus)
- ☒ Pod Mottle (Bean Pod Mottle Virus)
- ★ ☒ Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

- Soybean Cyst Nematode (*Heterodera glycines*)
- ★ ☒ Race 1 ☒ Race 2 ☒ Race 3 ☒ Race 4 ☐ Other (Specify) _____
- ☒ Lance Nematode (*Hoplolaimus Colombus*)
- ★ ☒ Southern Root Knot Nematode (*Meloidogyne incognita*)
- ★ ☒ Northern Root Knot Nematode (*Meloidogyne Hapla*)
- ☒ Peanut Root Knot Nematode (*Meloidogyne arenaria*)
- ☒ Reniform Nematode (*Rotylenchulus reniformis*)
- ☐ OTHER DISEASE NOT ON FORM (Specify): _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

- ★ ☐ Iron Chlorosis on Calcareous Soil
- ☒ Other (Specify) IT IS A SOIL CHLORIDE INCLUDER

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

- ☒ Mexican Bean Beetle (*Epilachna varivestis*)
- ☒ Potato Leaf Hopper (*Empoasca fabae*)
- ☐ Other (Specify) _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape		Seed Coat Luster	
Leaf Shape		Seed Size	
Leaf Color		Seed Shape	
Leaf Size		Seedling Pigmentation	

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/POD
				CM Width	CM Length	% Protein	% Oil		
Submitted	121	1.3	66			43.6	20.6	13.1	
RA 452 Name of Similar Variety	127	1.2	76			41.6	21.9	12.1	

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A₂ in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

Amended August, 1995

EXHIBIT E

Statement of the Basis of Applicant's Ownership

Variety 'Chesapeake' was originated and developed by Glenn R. Buss, an employee of Virginia Polytechnic Institute & State University. By agreement between employee and Virginia Polytechnic Institute & State University, all rights to any invention, discovery, or development made by an employee are assigned to Virginia Polytechnic Institute & State University. No rights to such invention, discovery, or development are retained by the employee.

JUL 30 1995

JUL 30 1995